

Eastern Kern County Air Pollution Control District



2018-2019 Information Report





A message from the **AIR POLLUTION CONTROL OFFICER**

On behalf of the Eastern Kern Air Pollution Control District Board of Directors, it is my pleasure to present the Eastern Kern Air Pollution Control District 2018-2019 Report. This is the first time the District has presented a report of this type. Initially, this report was proposed to clarify information presented by the American Lung Association (ALA) in their “2017 State of the Air Report.” However, between the time the document was proposed, and the writing of this message, I went on vacation. While on vacation a person from North Carolina asked me “What do you do for a living?” I told him I worked for the Air Pollution Control District in Eastern Kern County in California, and explained what our agency does. I’ve had the same question asked of me in Kern County. I then realized, we haven’t done a great job of telling Eastern Kern residents about who we are and what we do. To begin, our mission is:

“To attain and maintain National and State Ambient Air Quality Standards and to insure air pollutants do not pose a nuisance or significant public health threat.”

The mission is simple enough; the question is “how.” We attain our goals through plans, education, rules and regulations, permitting, grants, and enforcement. We determine how well we are doing through air monitoring.

The “Plan” is the first step. Unfortunately, the District does not have unlimited funds; therefore, based on our resources we plan what we can do with our budget. Additionally, we generate plans to attain National and State Ambient Air Quality Standards. We also assess current rules and look at technology that may lead to new rules to decrease air pollution, including toxic air contaminants.

Next, we educate. Education is the key to what we do. We educate the community and our regulated sources on:

- Why good air quality is important.
- What all of us can do to have good air quality.
- What the Air District is.
- What can happen if rules and regulation are not followed.

Rules and Regulations is our third method in helping air quality. Most of our regulations are focused on controlling emissions from facilities (gasoline stations, cement plants, etc.). However, some of our rules are for normal residences. Over the years we have seen emission reductions and better air quality from implementation of the District’s Rules and Regulations.



We issue operating permits to facilities for many types of equipment and processes; from gasoline stations to cement kilns (and many sources in-between). The permits are utilized to minimize emissions from a facility, with the knowledge that emissions will occur from most facilities.

The District receives grant funds from California to assist in our efforts of reducing emissions in our District. These funds have been used to: buy “clean” vehicles at a reduced cost, retrofit diesel fueled vehicles, pave roads, and other dust mitigation projects. This year we will begin the Funding Agricultural Replacement Measures for Emission Reductions (FARMER Grant) Program which funds will aide in replacing older farm equipment; and the Woodsmoke Reduction Program that will provide funds to replace older wood stoves and fireplaces with cleaner burning devices.

Our final important method in helping air quality is Enforcement. Our Enforcement Group completes inspections of all facilities in the District and surveys throughout the District. In the rare occasion, when someone is insistent on NOT being a good neighbor, the District issues Notices to Comply (NTC) and/or Notices of Violation (NOV) to the offending party. The NTC is like a “fix it” ticket, where the offending party is given time to repair or fix the emissions problem. NOV's are more egregious and (depending on the volition) may result in fines.

Using the tools at our disposal, we have reduced air pollution by over 85%, since the District's inception over thirty years ago. With all things in life, we balance regulations with economics. Because great air doesn't matter if you don't have anything to eat.

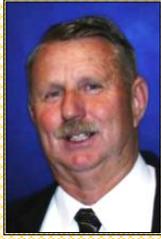
Glen E. Stephens, P.E.
Air Pollution Control Officer



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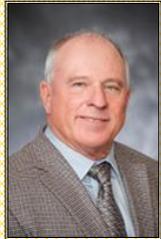
Governing BOARD



Chair
Don Parris
City Council, California City



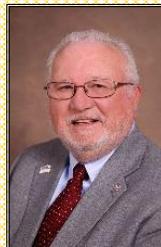
Vice Chair
Zack Scrivner
District II Supervisor



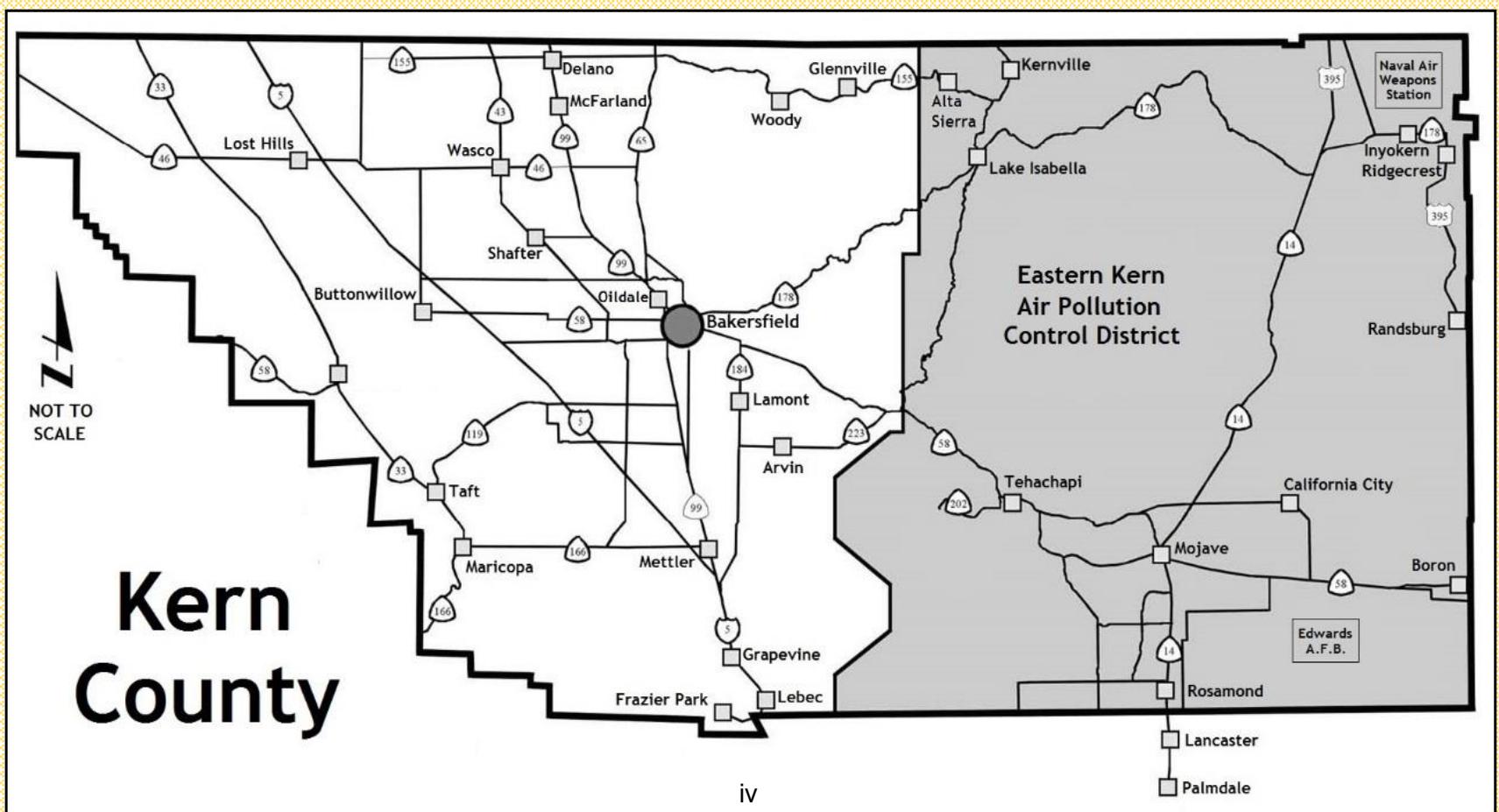
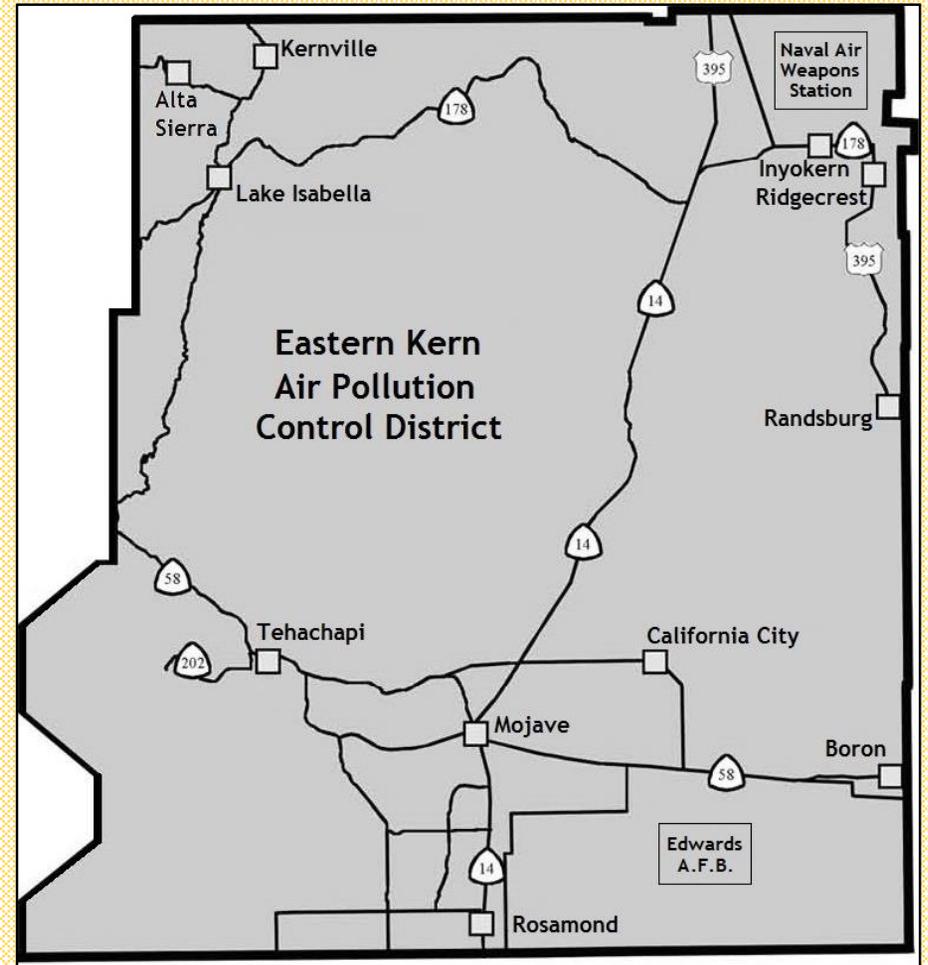
Mick Gleason
District I Supervisor

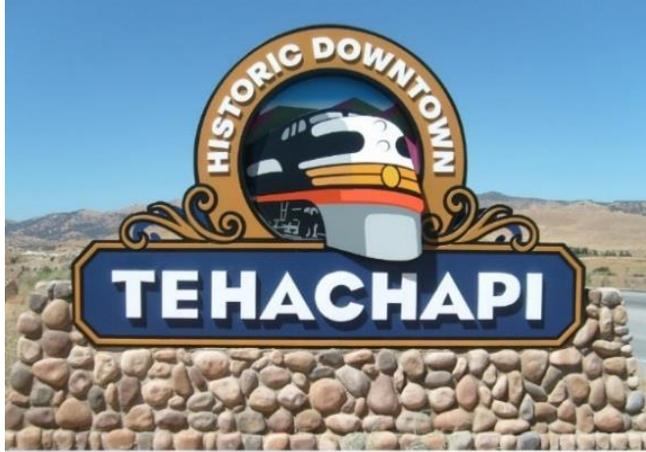


Eddie Thomas
Vice Mayor, Ridgecrest



In Memoriam:
Ed Grimes
Former Mayor, Tehachapi





About the DISTRICT

The Eastern Kern Air Pollution Control District (District) is located in the western edge of the Mojave Desert and includes approximately 3,707 square miles of the eastern half of Kern County.

This region contains a unique mix of geography, topography, and meteorology separated from heavily populated valleys and coastal areas to the west and by several mountain ranges to the south.

The climate is very dry and arid with little rainfall. Temperatures can exceed 100° Fahrenheit sixty to seventy days per year.

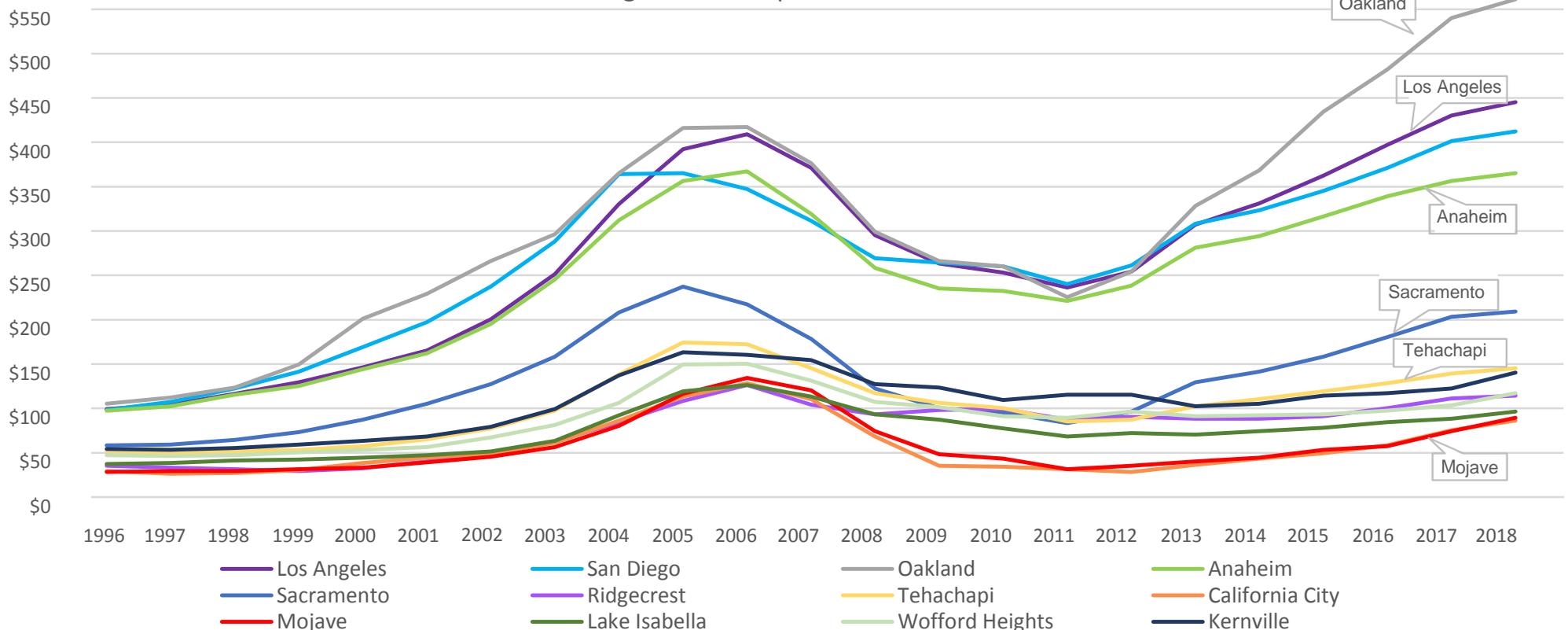
Although the District is primarily rural with a relatively low population of 132,000 compared to its size, it is classified as a medium district due to its vast industry and number of large area sources.

Housing

While there are many places in California with a high cost of living, the District has noticeably affordable housing rates. Estimates taken in July 2018 shows that Tehachapi has an average rate of \$156 per square foot, while Ridgecrest is approximately \$125 per square foot.

The rates in other major cities in California are double or sometimes triple of our current rates; Anaheim (\$376 ft²), Los Angeles (\$456 ft²), San Diego (\$423 ft²) and Oakland (\$572 ft²). Please see the chart below for a closer look at the housing trends over the last two decades.

Housing Costs Per Square Foot



Outdoor Activities

Due to Kern County's size and geography, there is a wide variety of landscapes within Kern's boundaries: mountainous regions, bodies of water, high desert and rocky terrains. Whether it's wine tasting or apple picking, Eastern Kern County offers a selection of outdoor activities for our community to enjoy,

Camping – The Kern River Valley offers a variety of camp grounds in the surrounding area of Lake Isabella. Visitors can enjoy camping lakeside or in a forested atmosphere in their recreational vehicle or tent. Camping is also available in the Tehachapi Mountains, Jawbone Canyon or at Red Rock Canyon State Park off of Highway 14.

Off-Roading – Along with camping, Jawbone Canyon is also a destination for riding your green or red stickered Off Highway Vehicles (OHVs). There is a wide variety of opportunities and trails in which to operate 4x4's, dirt bikes, or All-Terrain Vehicles (ATV). ATVs are also available to rent at the Jawbone Country Store on Highway 14.

Water Activities – You can enjoy an afternoon of fishing, boating, or watersports including kayaking in Lake Isabella. There are also guided tours to take you rafting down the Kern River. Rafting outings can range from beginner to experienced skill levels and include camping and picnics.

Glider Flights – Visitors who want to learn to pilot a plane on their own or want to ride with a certified pilot for the afternoon, can do this in Eastern Kern County. Gliders are towed to altitude by a high powered single engine aircraft. Once the correct altitude is reached, the towline is released and the glider soars in a motor-less flight while passengers experience the scenic views. At the end of the flight, the Glider is landed smoothly by the pilot. California City Airport, Inyokern Airport, and Mountain Valley Airport in Tehachapi have Glider Flight lessons and rides available.

Snow Activities – Seasonal snow allows for skiing or snowboarding at the Alta Sierra Ski resort. Automated lifts take visitors to a higher elevation and there are numerous trails to choose from, depending on your experience level. Riding inter-tubes is also available at the resort. The inter-tube run also has a small lift to allow for more time tubing and less time hiking the hill.





Filming

The varied landscapes of Eastern Kern County provide interesting backdrops for some major Hollywood films and TV productions. Some filming was done in:

RED ROCK CANYON, CANTIL

Jurassic Park starring Sam Neill, Laura Dern and Jeff Goldblum. While much of the movie's filming was done in Hawaii, Red Rock Canyon and the Tehachapi pass were utilized in creating archeological dig scenes.

Holes starring Shia LaBeouf, Sigourney Weaver and Jon Voight. A story where a boy gets into trouble and is sent to a juvenile work camp to dig holes in the desert, Cantil's landscape assisted with the nature of the movie.

MOJAVE AIR & SPACEPORT

Speed starring Keanu Reeves, Sandra Bullock and Dennis Hopper. The Mojave Airport stood in for LAX for its climactic scenes involving a cargo jet explosion.

EDWARDS AIR FORCE BASE

Armageddon starring Bruce Willis, Ben Affleck and Billy Bob Thorton. When asteroids are discovered to be barreling towards Earth, the National Aeronautics and Space Administration (NASA) and the U.S. Military must create a plan to save Earth. The hangars and surrounding scenery in Edwards Air Force Base fits perfectly with the theme of the film.

Iron Man starring Robert Downey Jr, Gwyneth Paltrow, Jeff Bridges and Terrence Howard. A storyline where business mogul and billionaire Tony Stark is often transported by plane, Edwards Air Force Base helps create a scene with Tony arriving on a military transport plane and touring a hangar.

CALIFORNIA CITY

The Adventures of Rocky and Bullwinkle starring Robert De Niro



ROSAMOND

Rat Race starring Brecklin Meyer, Jenica Bergere, Whoopi Goldberg, and Cuba Gooding Jr., among many others.

Ocean's Thirteen starring many actors, including Brad Pitt, George Clooney, Matt Damon and Elliot Gould to name a few.

Furious 7 starring Vin Diesel, Paul Walker, and Dwayne Johnson. The *Fast and the Furious* film series is known for characters immersed in stealing, upgrading and racing vehicles. The production team utilized the track at the Willow Springs International Motorsports Park for a scene in the film called "Race Wars". The track is popular with automobile-related filming.

TEHACHAPI

Terminal Velocity starring Charlie Sheen and Nastassja Kinski.

The Hangover Part III starring Bradley Cooper, Zack Galifianakis, Ed Helms and Justin Bartha.

Both movies have scenes that were filmed among the giant wind turbines at the southeastern end of Tehachapi. The Hangover Part III included additional filming along Highway 58, requiring the highway to be shut down during production.

BORON

Erin Brockovich starring Julia Roberts, Albert Finney and David Brisbin. While the movie was based on a true story about Hinkley, California, much of the film production was completed in Boron.

RIDGECREST

Planet of the Apes with Mark Wahlberg, Helena Bonham Carter and Tim Roth.

Star Trek V: The Final Frontier starring William Shatner, Leonard Nimoy and DeForest Kelley.

Both films take place in a futuristic setting with interplanetary travel. The Trona Pinnacles rock formation just outside of Ridgecrest created the mood for scenes in both films where the storyline took the characters to new, strange planets.



Sources of **POLLUTION**

Industries

Aerospace Industries

The District is home to the Mojave Air and Space Port located in Mojave which currently has more than 60 companies engaged in everything from flight development, highly advanced aerospace designs, parts coating, and flight test and research. One of the companies is Stratolaunch which is building the world's largest airplane capable of launching rockets into space. Innovative Coatings Technology Corporation (INCOTEC) specializes in advanced coatings for the global aerospace industry. From an air quality standpoint, most emissions from aerospace industries are volatile organic compounds (VOC).

Mining Industries

There are five (5) mining facilities operating in the District: (3) cement plants, (1) borate mining plant, and (1) gold and silver mining plant. All of

the facilities have two similar manufacturing processes. The first process begins at the mine; removing raw materials from the quarry, transferring them to haul trucks, and transporting them to a crusher. The District's emission concerns are particulate matter (PM) emissions from the drilling, blasting, hauling, and crushing of raw materials. The second process from these plants is to utilize some type of combustion (heating) to get the final product. Combustion of fuel in air mainly generate oxides of nitrogen (NOx), VOCs and toxic air pollutants. Because these emissions concern the District, facilities are under strict rules to reduce emissions and to monitor and control NOx, VOCs and toxic emissions.

Farming Industries

The District is home to SunSelect, which specializes in growing greenhouse crops such as tomatoes and bell peppers. SunSelect is California's only large-scale greenhouse grower that can produce bell peppers year-



round. The District is also home to operations from Grimmway Farms, Bornt Family Farm, and Crystal Organic Farm.

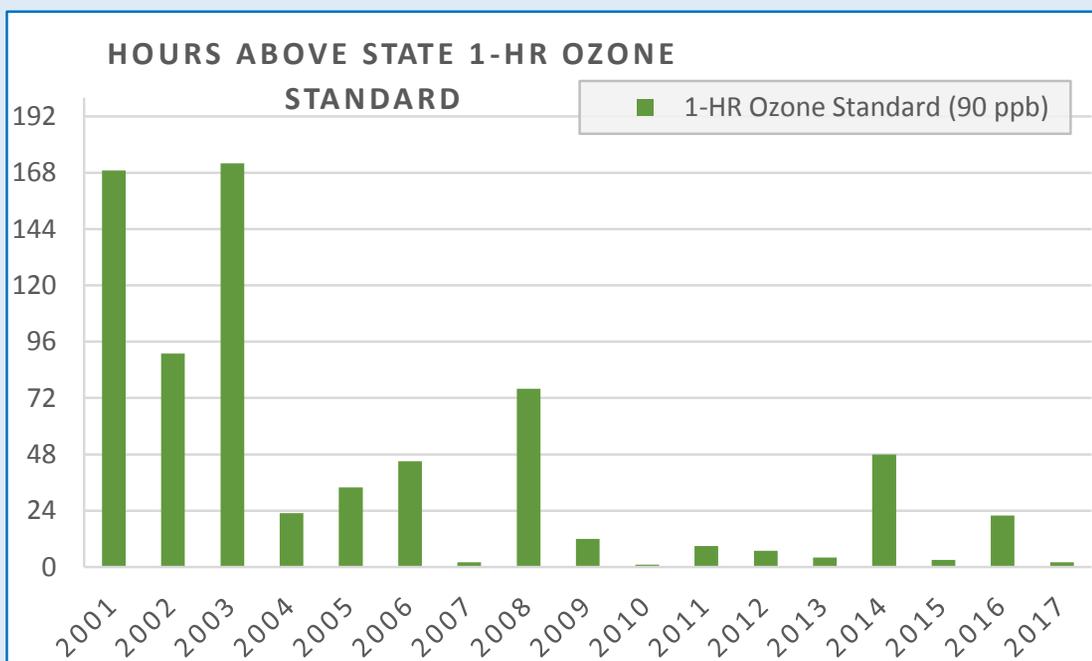
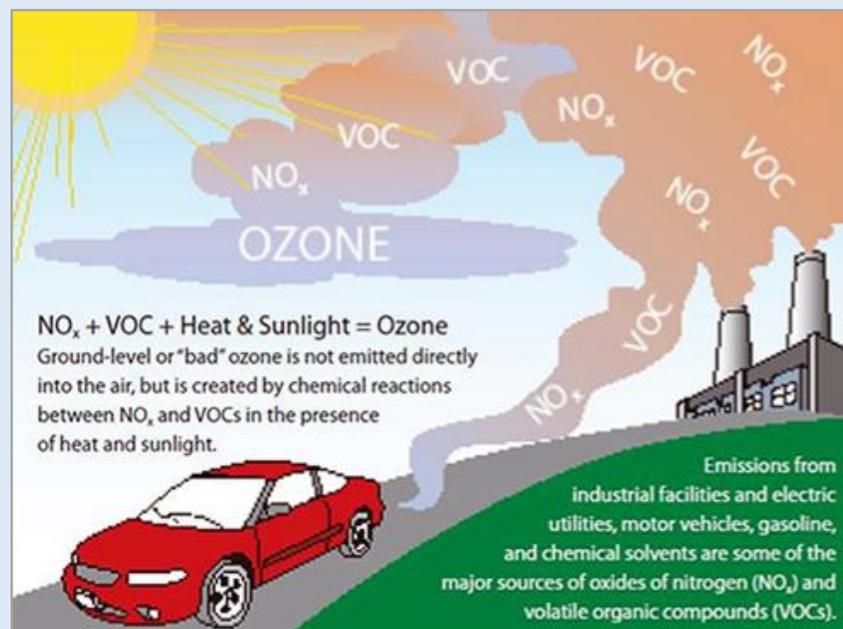
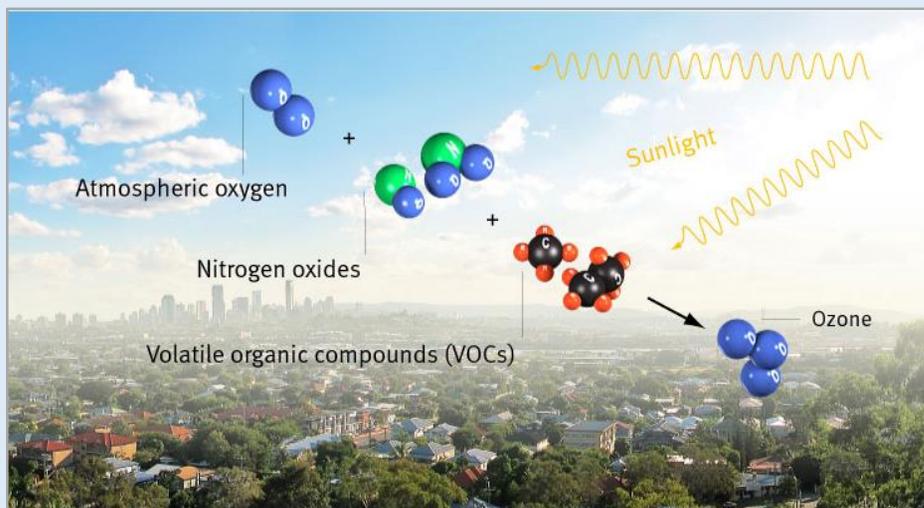
Military Bases

The District has two military bases: The Air Force Test Center at Edwards Air Force Base (EAFB), east of Rosamond, and the Naval Air Weapons Station (NAWS) at China Lake. EAFB leads the test and evaluation operations for air-delivered weapons, flight and ground testing of aircrafts and navigation and guidance systems.

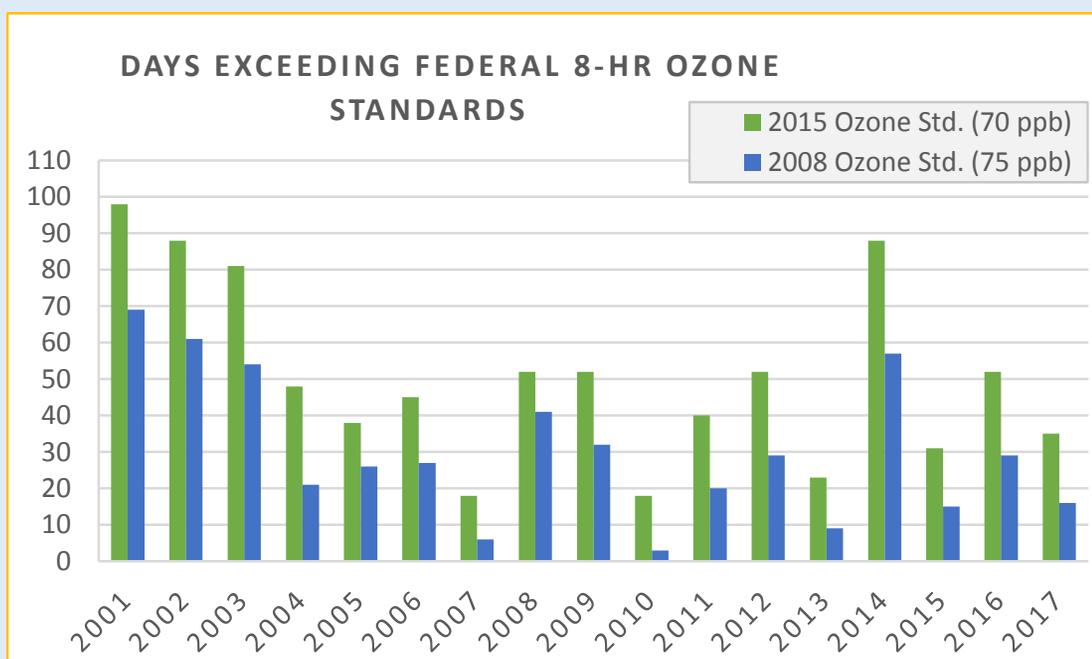
NAWS operations support the Navy's research, testing and evaluation of cutting-edge weapons for warfighters. Both military bases have air permits with the District. Some permits include jet and rocket engine testing operations, natural gas fired boilers, gasoline storage tanks, and emergency generators. Both facilities emit criteria and toxic air pollutants.



Ozone TRENDS

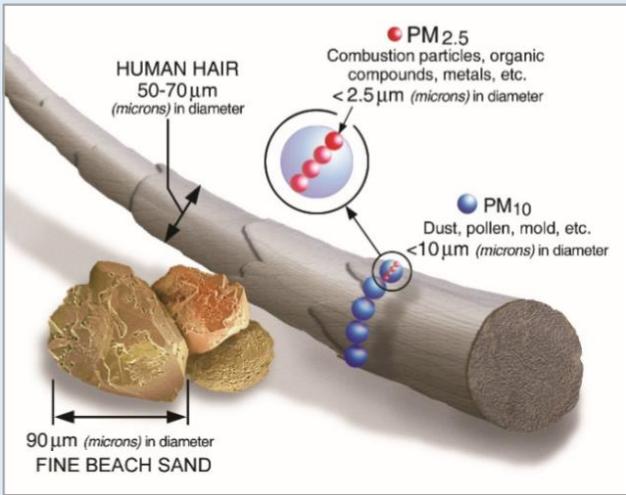


Hours over the state 1-hour ozone standard have seen a significant decrease compared to previous years.

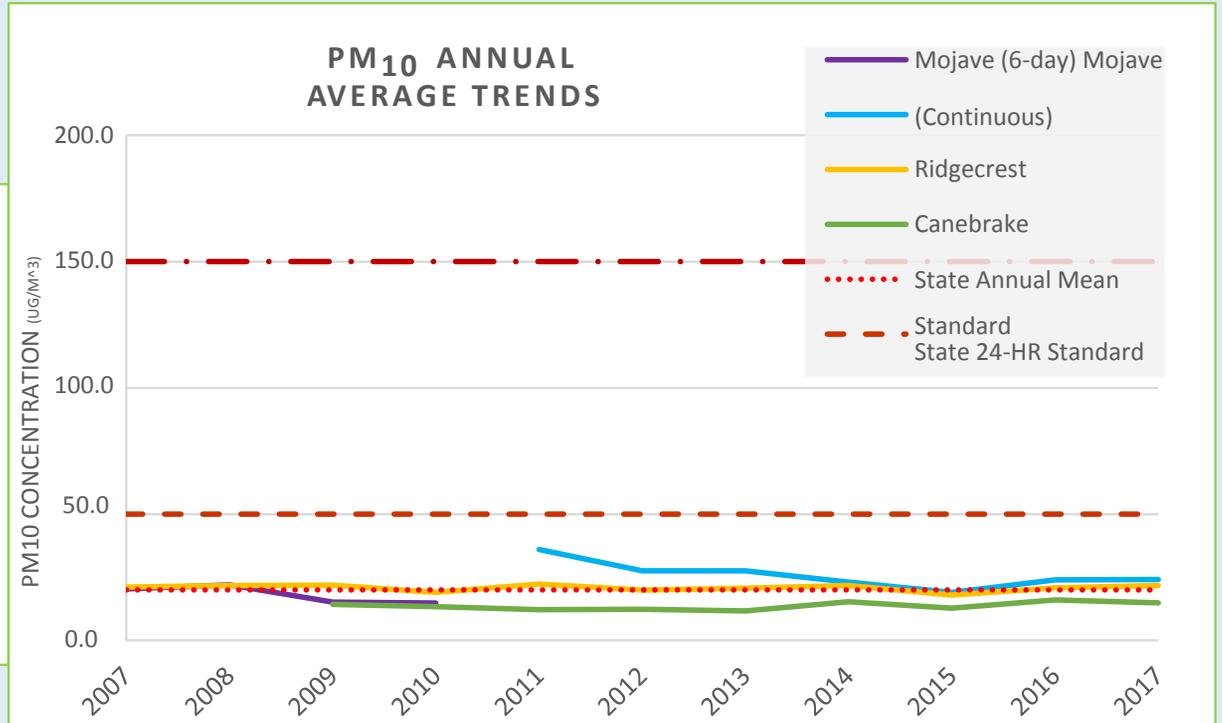


Exceedances of the Federal 8-hour ozone standard have decreased compared to previous years. However, District ozone levels are heavily impacted by ozone transport from both the San Joaquin Valley Air Basin and the South Coast Air Basin.

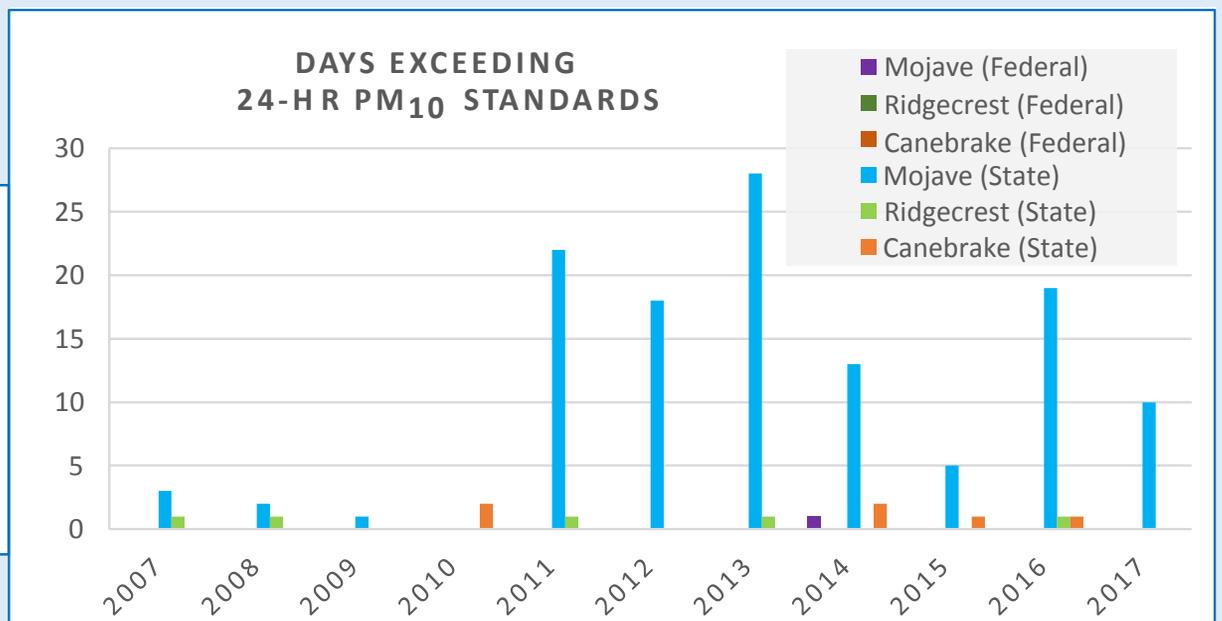
PM₁₀ TRENDS



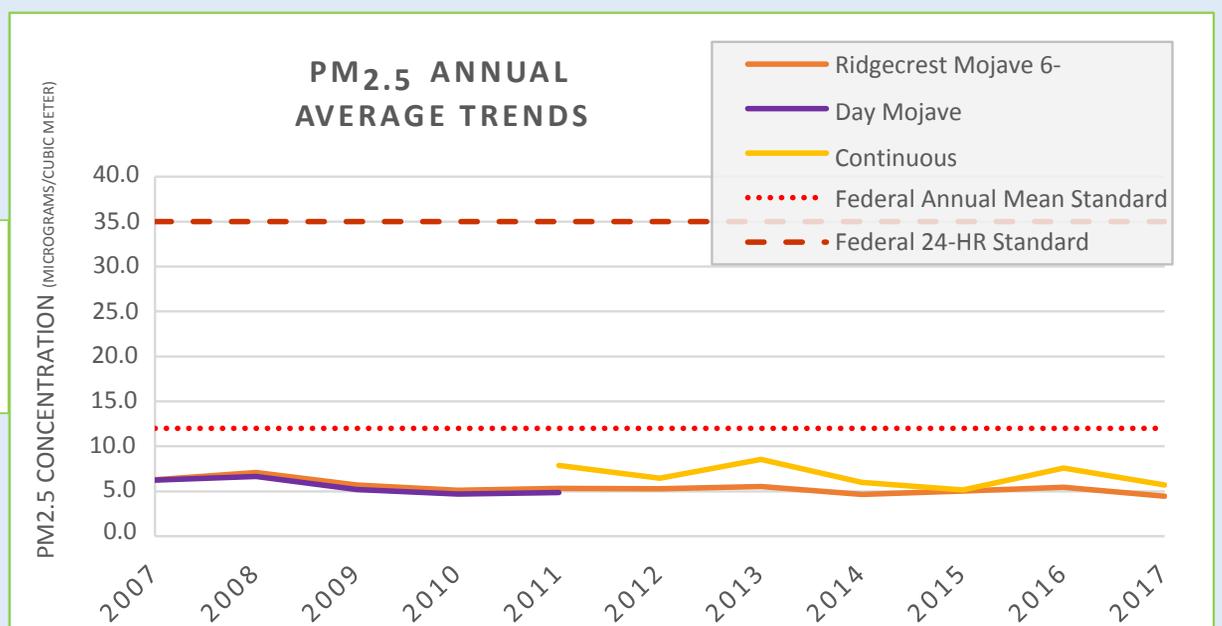
District air monitors indicate PM₁₀ levels are well below federal limits. However, the District has three separate planning areas with differing PM₁₀ attainment statuses: The Indian Wells Valley area is listed as Attainment Maintenance; the Kern River & Cummings Valley areas are listed as Serious Nonattainment, because these areas were previously part of the San Joaquin Valley planning area; the remaining areas of the District are listed as unclassifiable attainment.



In 2011, the air monitor in Mojave that ran once every 6 days was changed to a continuous (hourly) air monitor. The higher frequency of monitor reading results in overall higher readings. However, only one validated exceedance of the Federal 24-hour PM₁₀ standard has been observed across all three air monitors in the past 10 years.



The District is in attainment for PM_{2.5} ambient air quality standards, air monitor readings confirm the District is meeting federal and state standards.





Wildfire **SEASON**

Damage to the state's wildlands from the extended drought continues to intensify wildfire conditions throughout California. According to Cal Fire, an estimated 129 million trees have died across California due to drought conditions and bark beetle infestation. Those dead and dying trees make forests more vulnerable to wildfires. There have been multiple wildfires throughout the District since 2015. The Erskine Fire, reported June 23, 2016, was the largest, and burned more than 48,000 acres, took two lives, and destroyed more than 250 structures.



During wildfires, District staff are continually informed by land managers on the latest situation so that the District can provide timely information to residents to minimize exposure to wildfire smoke. District Health Advisories provide important "Dos and Don'ts" for residents when smoke is impacting surrounding communities.

In addition, State and Federal Forest Services work to reduce the number and severity of future wildfires by utilizing prescribed burning and other practices within their lands. In California, wildfires are not a question of if, but of when. "One Less Spark – One Less Wildfire" is a Cal Fire campaign slogan for California residents. According to Cal Fire, approximately 95% of all wildfires in California are caused by human activities. That is why fire agencies need the public's help to prevent wildfires. More information on how to prevent wildfires can be found at www.calfire.ca.gov. At the end of the day, "An ounce of prevention is worth a pound of cure." It is more sensible to head off a disaster than to deal with it after it occurs.



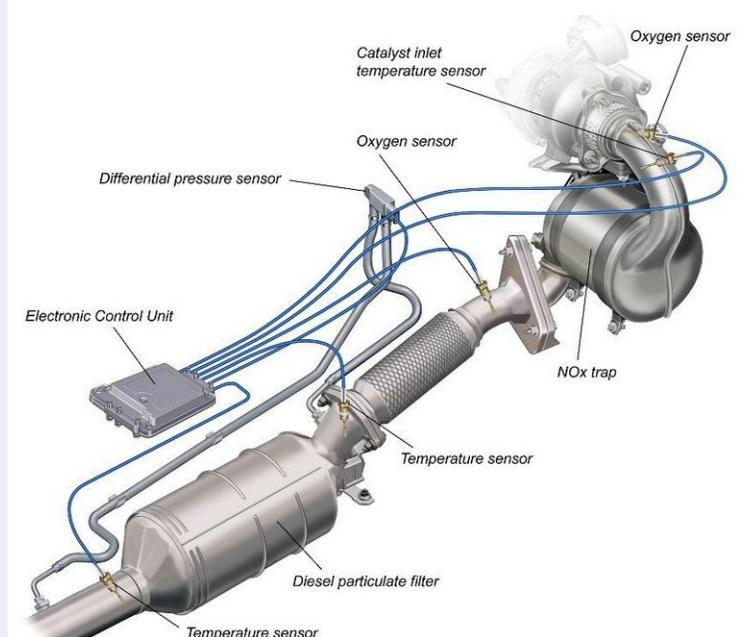
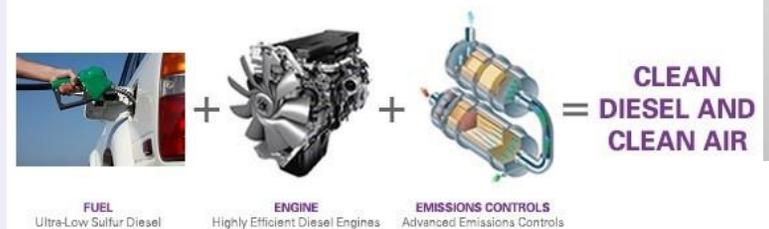
Toxic Emissions In THE DISTRICT

In addition to attaining and maintaining air quality standards set by State and Federal Governments, the District is also responsible for ensuring that toxic air pollutants do not pose a nuisance or significant health threat to the surrounding community. Every year, the State's Air Toxics Hot Spots program (known as AB2588) requires the District to quantify and assess health risks from subject facilities to nearby residents, notify affected residents of significant risks, and to reduce those significant health risks to acceptable levels.

The State also implements Airborne Toxic Control Measures (ATCMs) regulations to reduce toxic emissions by requiring prescribed control measures for various source categories that cause significant health risks to nearby communities. Additionally, District requirements for installing Best Available Control Technology for new permits or modifications to existing facilities also ensure that there will not be a significant increase in health risk to the public. As illustrated in the figures, air toxics programs from the State and District has resulted in cleaner air for residents in the District.



NEW CLEAN DIESEL TECHNOLOGY



District OPERATIONS



Plans and Regulations

Regulations - The Clean Air Act of 1970 (CAA) required the United States Environmental Protection Agency (EPA) to develop health-based National Ambient Air Quality Standards (NAAQS) for several categories of air pollutants, including ozone and fine particulates (PM₁₀). The EPA periodically reviews the NAAQS and associated scientific data to determine when appropriate revisions are needed.

The Federal Clean Air Act Amendments (FCAAA) of 1990 gave each state the primary responsibility for achieving the NAAQS. At that time, the EPA viewed all of Kern County as a single “Planning Area” even though it contained two air basins.

In 1992, Kern County was split between two air districts. The San Joaquin Valley air basin of Kern County became part of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the high-desert portion of Kern County (Mojave Desert air basin) remained the Kern County Air Pollution Control District, renamed Eastern Kern Air Pollution Control District in May 2010.

The EPA continued to consider Eastern Kern part of the San Joaquin Valley Federal Ozone Planning Area, even though located in the Mojave Desert air basin. In 2001, upon formal request, the EPA agreed to consider Eastern Kern a separate planning area.

In 2004, the EPA divided the District into the Indian Wells Valley (IWV) Planning Area, and the remainder of Eastern Kern County (Nonattainment Area). Air monitoring data from the IWV indicated low ozone levels with the peak being around 0.067 ppm. The IWV easily attained the 1997 8-hour ozone NAAQS of 0.08ppm, and

was already in attainment with the 2008 ozone NAAQS of 0.075ppm before it was even adopted.

The District’s nonattainment area attained the 1997 8-hour ozone NAAQS in 2012, and adopted the *2017 Ozone Attainment Plan For 2008 Federal 75 ppb 8-Hour Ozone Standard* on July 27, 2017. The District’s 2017 Ozone Attainment Plan provides data to show that the entire District will be in attainment with the 2008 NAAQS by the year 2020.

Additionally, the majority of the District has attained the PM₁₀ NAAQS, with the exception of the Kern River Valley, Bear Valley, and Cummings Valley. These regions were previously included in the federally designated San Joaquin Valley PM₁₀ Serious Nonattainment Area. At the District’s request, the EPA made these regions a separate nonattainment area in 2008. Air monitoring data has shown these regions to be in attainment. Unfortunately, a few more years of “clean data” are necessary to have the PM₁₀ nonattainment area reclassified as in attainment.

Plans - District plans include emissions inventories that identify sources of air pollutants, modeling and forecasting to estimate future levels of emissions, and evaluating various strategies to reduce future air pollution. District plans also include innovative alternative strategies for accelerating attainment through non-regulatory measures such as community outreach, public education, and incentive programs. In order to attain the NAAQS, the District currently has 135 rules and regulations along with various air quality plans.



Permitting

Permitting is one of the most versatile tools the District has available to help carry out its mission and is used to aid local businesses in complying with the District's regulations. The District currently issues and manages permits, plans, and registrations for over 250 stationary sources of air pollution in eastern Kern County.

Authorities to Construct & Permits to Operate - Stationary sources that emit air pollutants, ranging from gasoline stations to cement plants, are required to obtain permits from the District before construction or operation begins. The permitting process has two major steps:

-Prior to commencing construction, the owner/operator of air pollutant emitting equipment must first apply for an Authority to Construct (ATC) permit. The application review process is an important step for the applicant, District, and interested public, where the proposed project is assessed for compliance with local, state, and federal air pollution regulations. If the project is deemed to be in compliance, an ATC is assigned. New sources of air pollution and modifications to existing sources that result in an increase in emissions are required to implement best available air pollution control devices or techniques.

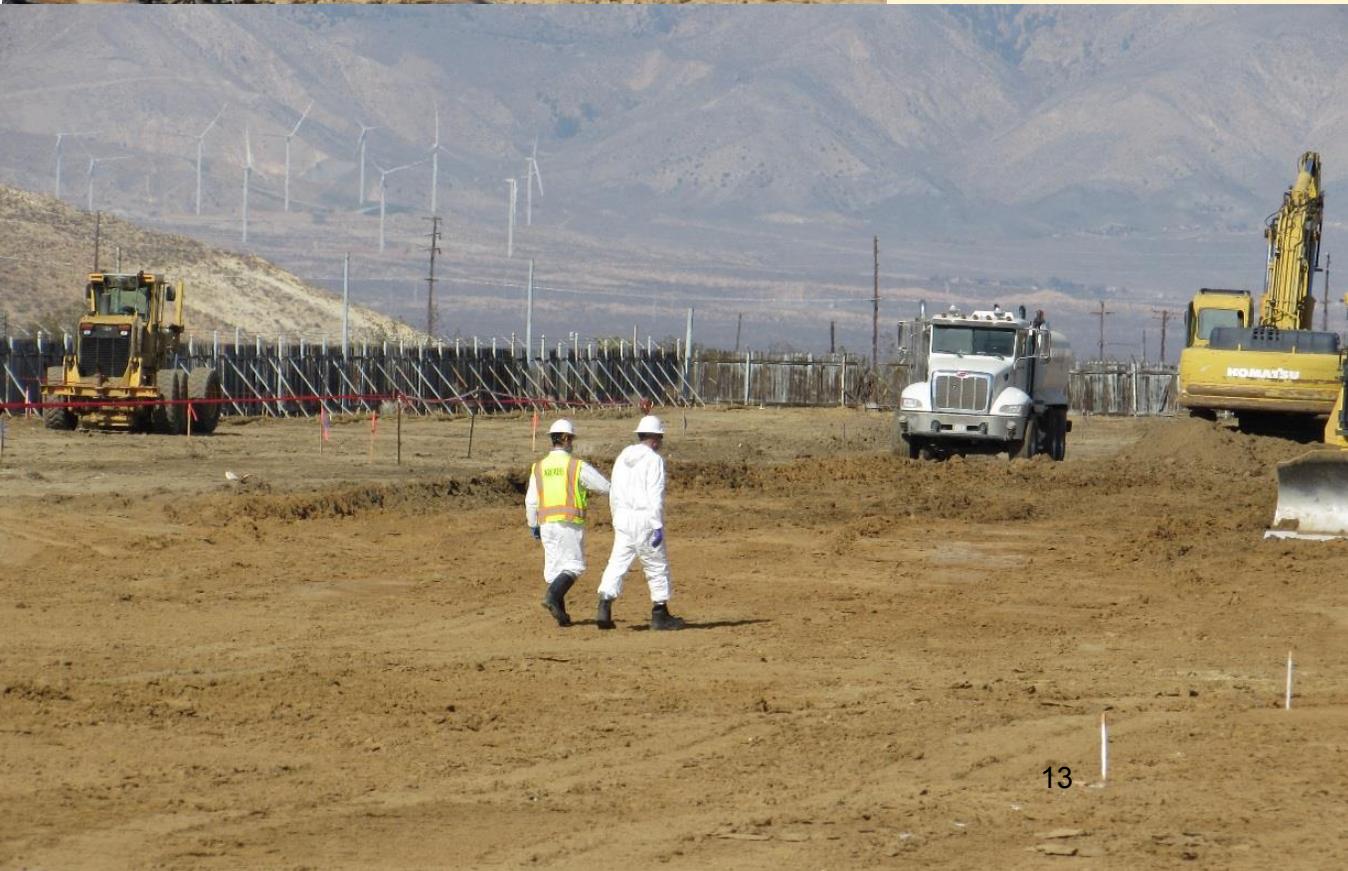
-After the construction of the equipment authorized by the ATC permit is completed, it undergoes an initial compliance inspection, which includes verifying installation of emission controls required by the ATC permit as well as any necessary emissions testing. Upon passing the inspection, a Permit to Operate is issued.

Federally Mandated Operating Permits (Title V) - Federal law requires facilities considered to be "Major Sources" of air pollution to obtain a Title V permit; Title V permits enable both the EPA and the public to take a more active role in the permitting process of the largest air pollutant emitters. The District currently has Title V permits issued to 10 facilities.

Emissions Inventory - Each year the District collects emission and process data from facilities, calculates annual emissions from those facilities, and reports the emissions to the California Air Resources Board (CARB). This information is used to aid in assessing the District's progress in improving air quality, as well as for modeling and planning purposes.

Air Toxics Program - The District performs multiple tasks with the goal of reducing the risk of toxic air pollution. The District implements state and federal air toxic control regulations, evaluates new and modified sources of toxic air contaminants to ensure that emissions do not pose a significant health risk to the public, and publishes annual reports on toxic emissions from facilities that emit significant amounts of toxic air contaminants.

California Environmental Quality Act (CEQA) - CEQA is state law that requires the environmental impacts of a project to be assessed and disclosed to the public, and requires mitigation of potentially significant impacts discovered during the assessment to a less than significant level when feasible. District staff reviews land development proposals, stationary source permit applications, and attainment plans for compliance with the requirements of CEQA.



Enforcement

Since the District's inception, one of our primary goals has been compliance. Compliance ensures that the District will attain the National Ambient Air Quality Standards, and, hence, cleaner air. The District has over 250 sources and those sources have over 1900 air permits between them. These sources range from gas stations to rocket engine testing.

The District's unique jurisdiction is home to many interesting industries like military bases, cement plants, gold mining, the only borate mine in the United States, and aerospace research and development facilities. As an agency, we work with individuals from these sources to make sure they are improving their processes to keep district air clean. These industries are inspected regularly and if needed, given instruction on things they need to monitor, improve, or fix. Their permits state the conditions that they need to comply with in order to reduce air emissions. Other sources of air contaminants such as demolition/renovation sites and construction sites that may not have permits may be inspected as well to monitor earthmoving activities and asbestos removal (if present).

Source Testing - Within our District boundaries, certain sources are required to test their equipment to prove compliance. Gas stations, for instance, are required to annually test their equipment. The District is notified of the test procedures to be performed and the date and time of each test so that an Air Quality Specialist can witness the testing. Third party testing agencies must be used and these testing agencies must be certified to complete the test being performed.

Complaints - Complaints are a priority for the District. An Air Quality Specialist in the District will receive a complaint and promptly proceed with an investigation. Specialists interview complainants, investigate the source of the complaint and take action to resolve the issue. Our goal is to alleviate any significant air issues within the District and we always strive to make our communities better.

Enforcement Actions - Enforcement action can be taken by the District if violations are found. A notice of violation is given if a source/individual violates a District rule. The goal when issuing violations is requiring a non-compliant source to fix the problem and demonstrate regular compliance. Not only may a fine be issued to the source, but the source may be given a notice of abatement if non-compliance is causing extremely hazardous conditions to the general public.





Air Monitoring

The District operates air quality monitors to determine the state of overall air quality and to generate data useful to the public and various researchers. After the District was downsized in 1992 and subsequently readjusted in 1996, additional air monitors were added in Tehachapi, Ridgecrest, Mojave and Canebrake. Most of the original equipment installed has been upgraded with new technology that has the ability to give hourly readings. The air monitor in Canebrake will be upgraded in 2019. Upgrading this site will complete the updates for all of the District’s air monitors.

Air monitors in the District are used to monitor Particulate matter (PM₁₀ and PM_{2.5}) and ozone (O₃). The air monitors location and pollutant measured are below:

Location	Pollutant Measured
Tehachapi	PM ₁₀ and Ozone
Mojave	PM ₁₀ , PM _{2.5} and Ozone
Ridgecrest	PM ₁₀ and PM _{2.5}
Canebrake	PM ₁₀

In the coming year, the District will add a network of “Purple Air” monitors to measure particulate matter throughout the District.

The Tehachapi, Mojave, and Ridgecrest sites utilize beta attenuation monitors (BAMs) to monitor the particulate matter in the air. This technique employs the absorption of beta radiation by solid particles extracted from air flow. This technique allows for the detection of PM₁₀ and PM_{2.5} in the atmosphere.

The air monitor in Canebrake is slated to be upgraded to the BAM type air monitor in 2019. The O₃ analyzers in Tehachapi and Mojave utilize a well proven, ultraviolet photometric measurement technique to precisely quantify O₃ concentrations.

Individual sites also utilize air monitoring to assure a site’s air quality is sufficiently maintained. Most solar facilities in the District and the active gold mine currently have on-site PM air monitoring. All sites utilize “up-wind” and “down-wind” air monitoring to assure PM concentrations between the two are sufficiently low and not worsening the air quality.



In addition to stationary air monitors, the District has two E-BAMs (portable BAM units) that can be deployed remotely. These can be used to determine if (or to what extent) a facility is causing a nuisance to the community at large. These air monitors can also be used during fire season to determine and measure smoke effects on communities' located down-wind of wildland fire sources.

Air monitoring is a key component of the District's mission. It takes a significant amount of the District's resources to assure the monitors are running properly and within parameters and protocols prescribed by CARB and the EPA. The instruments are required to be calibrated on a regular basis by District Staff and audited by CARB biannually. When the final upgrade is complete, each stationary site will have a meteorological station, complete with wind data, atmospheric pressure, relative humidity and temperature. These data are integrated into the same bundle as the air monitoring information. There is a close relation to meteorology and air quality.



Incentives PROGRAMS

The District offers financial incentives for the purchase and use of lower-emitting, cleaner technology through many grant programs. New, clean technology can come with greater or additional costs. The District's incentive programs provide funding to offset these costs and make cleaner technology more attractive and affordable to the grantees. The following sections provide brief overviews of the many incentive programs the District has to offer. Complete guidelines and applications are available on the District's website:

www.kernair.org under the "Grants" tab. All incentive programs are only available to Eastern Kern County residents, businesses, and farms.

Carl Moyer Diesel Emission Reduction Program - Diesel exhaust is a serious public health risk and considered the number one airborne carcinogen in California. The Carl Moyer Diesel Emission Reduction Program (CMP) complements California's regulatory programs by providing incentives for the incremental cost of cleaner-than-required heavy-duty diesel equipment that reduces NO_x, PM₁₀, and VOC emissions from diesel-fueled engines. The District's CMP offers funding for engine replacement and retrofit of a wide variety of diesel-powered vehicles and equipment that includes: Diesel Powered Emergency Equipment, On-Road Heavy-Duty Vehicles, Off-Road Compression-Ignition Equipment, Agricultural Pump Engines, Locomotives, and Aircraft Ground Support Equipment

DMV Grant Program - Assembly Bill 2766 (AB 2766) authorized the Department of Motor Vehicles (DMV) to collect an annual motor vehicle registration clean air surcharge of \$4 per vehicle. Revenues generated from AB 2766 are directed for use in the purposes of reducing air pollution from motor vehicles and other related sources needed to implement the California Clean Air Act (CCAA). In 1992, the District began allocating a substantial portion of its annually collected AB 2766 funds through its DMV Grant Program. The DMV Grant Program offers funding for qualified motor vehicle related emission reduction projects. Project categories vary from year to year, and have included funding for: vehicle replacement, vanpools, road paving, bike paths, video conferencing, public education, CNG refueling stations, and EV charge stations. Eligible projects can receive up to \$50,000 in grant money. The application period runs annually from October to February.

Lower Emission School Bus Program - The District's Lower Emission School Bus Program (LESBP) provides local school districts up to \$110,000 for the replacement of each older high-emitting school bus. The new bus must meet the state's lowest emissions standard and the old bus must be salvaged. The District replaces two to three buses per year and has replaced 24 school buses since 2008.



DMV Grant Voucher Program - In an effort to streamline the vehicle replacement component of the DMV Grant Program and to make funds available for a larger number of applicants, the District began the DMV Grant Voucher Program in 2016. The DMV Grant Voucher Program offers vouchers for the purchase of a new lower-emitting vehicle in the amounts of \$2000 for a Partial Zero Emission Vehicle (PZEV) and \$3000 a Zero Emission Vehicle (ZEV). The DMV Grant Voucher Program is ongoing with no deadline to apply.

Applications are processed on a first-come first-served basis and vouchers are issued accordingly. The program is very popular. In the second year of the program, all funds were depleted in one and half months.

Wood Smoke Reduction Program - The Wood Smoke Reduction Program is part of California Climate Investments (CCI), a statewide program that puts cap-and-trade dollars to work reducing greenhouse gas emissions and improving public health and the environment. Assembly Bill 1613 committed CCI funding for replacing uncertified, inefficient wood burning devices in residential homes such as wood stoves, wood inserts, or fireplaces used as the primary heat source with a cleaner burning, more efficient device. The Wood Smoke Reduction Program will offer each eligible applicant up to \$4000 towards the purchase and installation of a qualifying device.

FARMER Tractor Replacement Program - Most agricultural vehicles and equipment are operated for several decades because they are only used seasonally, built durably, and have a relatively low maintenance cost. Additionally, agricultural businesses are often reluctant to purchase new equipment due to the volatility of this sector caused by issues such as unpredictable weather or varying commodity prices.

Natural attrition of agricultural equipment is insufficient to meet California's emission reduction requirements. In recognition of the strong need to reduce agricultural emissions, the State Legislature allocated \$135 million to "reduce agricultural sector emissions by providing grants, rebates, and other financial incentives for agricultural harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment used in agricultural operations." To achieve this goal, the California Air Resources Board (CARB) developed the *Funding Agricultural Reduction Measures for Emission Reductions* (FARMER) program.

The District has been allocated \$737,000 in FARMER funds to be used for tractor and agricultural pump-engine replacement projects within Eastern Kern County. Carl Moyer Program guidelines will be used to determine project eligibility and grant award amounts. The District anticipates the FARMER program will begin funding projects in late 2018.



Outreach

The District works with its citizens, schools, nonprofit organizations, and local businesses to reduce air pollution through education and incentive programs. The District also works in collaboration with local, state, and federal government agencies to achieve a cleaner healthier environment.

The District conducts various public workshops and town hall meetings to present and discuss rule development and incentive programs throughout the year as needed. Additionally, all Board meetings and variance hearings are open to the public and welcome participation and comments.



On the **HORIZON**

Recently California entertained visitors from the Beijing Municipal Environmental Protection Bureau, Atmospheric Environment Management Division. China is looking to California to improve their air quality. California is known as a leader in many issues, including air quality. With international partners, we will see better air quality world-wide, including reduced ozone precursors and less global air pollutants (greenhouse gases).

It is estimated between one-third to one-half of the air pollution in California is from mobile sources (cars, trucks, trains, etc.). Therefore, regulations are proposed to reduce mobile source emissions, which would result in lower ozone and carbon monoxide emissions. Through air monitoring, we have seen ozone levels increase over the past few years. To combat this trend, the District is offering additional funds to reduce costs for lower emitting automobiles through the DMV Grant program. Lowering NOx and VOC emissions (ozone precursors) will reduce ozone emissions.

The District is increasing its air monitoring resources. 25-years ago, air monitoring was solely utilized for air quality attainment statuses. Now, air monitoring is a useful tool to be used for attainment status, air quality trends, and “real time” air quality information. We want to know the air quality immediately. The District is deploying new air monitors and upgrading existing monitors to allow the District post “real time” air quality and meteorological data on the District’s website.

Due to projected population growth, regulations to reduce mobile source emissions and offering aid with the DMV Grant program will improve air quality. The District will be able to monitor the current air quality, and, hopefully, not “see” **bad air**.







Eastern Kern APCD
2700 M Street, Suite 302
Bakersfield, California 93301

www.kernair.org
(661) 862-5250